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Jens Foegler

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08/25/2011

PROPAT, L.L.C.

425-C SOUTH SHARON AMITY ROAD

CHARLOTTE, NC 28211-2841

EXAMINER

JACOBSON, MICHELE LYNN

ART UNIT

PAPER NUMBER

1782

MAIL DATE

DELIVERY MODE

08/25/2011

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |  |                                       |  |
|------------------------------|--|---------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/580,976   | <b>Applicant(s)</b><br>FOEGLER ET AL. |  |
|                              | <b>Examiner</b><br>Michele L. Jacobson | <b>Art Unit</b><br>1782               |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2011.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 5) ☒ Claim(s) 1, 4 and 6-33 is/are pending in the application.
- 5a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 1, 4 and 6-33 is/are rejected.
- 8) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Examiner Notes***

1. Any objections and/or rejections made in the previous action, and not repeated below, are hereby withdrawn.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 31 and 32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.
4. Claim 31 has been amended to recite that the "dried coating has a weight per unit area of 60 to 92 g/m<sup>2</sup>". There is no support for the recitation of a range of coating weights in applicant's specification. Applicant's specification discloses ranges for the

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weight per unit area of the reinforcement layer, but only discloses single data points for the weight per unit area of the *coating*. As stated in MPEP 2163.05 III "With respect to changing numerical range limitations, the analysis must take into account which ranges one skilled in the art would consider inherently supported by the discussion in the original disclosure. In the decision in *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976), the ranges described in the original specification included a range of "25%- 60%" and specific examples of "36%" and "50%." A corresponding new claim limitation to "at least 35%" did not meet the description requirement because the phrase "at least" had no upper limit and caused the claim to read literally on embodiments outside the "25% to 60%" range, however a limitation to "between 35% and 60%" did meet the description requirement".

5. In the instant case, the original specification fails to recite a range of coatings weights and only has specific examples. Therefore, a new claim corresponding to the specific examples presents new matter because no range was previously disclosed.

6. Claim 32 recites that the food casing is "inedible". Applicant asserts on page 8 of the remarks submitted 8/15/11 that support for this limitation is implicitly present within applicant's specification because one of ordinary skill in the art would understand that "the mastication and swallowing of the recited fabrics and paper would be difficult, if not impossible". To support this assertion, applicant refers to Hammer et al. U.S. Patent No. 6,902,783 discusses that short pulp fibers are not digestible from which applicant concludes that "one skilled in the art would clearly expect that casings incorporating fiber of sufficient length and size to form the recited nonwoven fabrics or paper having a

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weight up to 400 g/m<sup>2</sup> would have a sufficiently elevated strength to be inedible and would further not be digestible". It is not necessary for a material to be digestible in order for it to be edible as evidenced by Hammer's disclosure that the short pulp fibers disclosed promote digestion. (Col. 3, lines 53-54) Furthermore, applicant has failed to provide any evidence of a nexus between fiber length and paper weight or any disclosure in applicant's specification relating to fiber length or strength. As such, applicant's assertions based on the disclosure of Hammer cannot be relied upon to provide an implicit disclosure of inedibility of the currently claimed invention.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 4, 6-8 and 10-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rose U.S. Patent No. 3,383,223 (hereafter referred to as Rose) with evidence provided by Wessling, R. A., Gibbs, D. S., Obi, B. E., Beyer, D., DeLassus, P. T. and Howell, B. A. 2002. Vinylidene Chloride Polymers. Kirk-Othmer Encyclopedia of Chemical Technology (hereafter referred to as Wessling) and Whistler, R. L. and Daniel,

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J. R. 2000. Starch. Kirk-Othmer Encyclopedia of Chemical Technology (hereafter referred to as Whistler).

9. Rose teaches a cellulose casing which adheres to a dried sausage emulsion and follows the shrinkage of the sausage during curing. (Col. 2, lines 36-39) The regenerated tubular cellulose casing of Rose has an inner surface coated with a protein, such as gelatin, and a dialdehyde which is effective to insolubilize the protein coating after drying, whereby the casing shrinks with and adheres to the surface of the sausage therein. (Col. 2, lines 50-57) Paper reinforced cellulose casings such as hemp paper reinforced cellulose casings and fibrous regenerated cellulose (viscose staple) casings are disclosed to be useful for the inventive casing. (Col. 3, lines 26-27, Col. 6, lines 21-22, 45-47)

10. Useful dialdehydes include glyoxal and glutaraldehyde. (Col. 3, lines 63-65) The coating is recited to comprise 0.1-5% protein and 0.005-5.0% dialdehyde based on the weight of the casing. (Col. 3, lines 68-71) The coating solution may also comprise up to 20% glycerol to assist in plasticizing the casing and the film which is formed on the casing. (Col. 4, lines 69-72)

11. The coating solution of Rose may also further comprise starch, which as evidenced by Whistler, is a polysaccharide which comprises a linear polysaccharide component, amylose and a branched polysaccharide component, amylopectin. (Whistler, pg. 3)

12. To produce the casing disclosed a wet fibrous casing or wet unreinforced regenerated cellulose casing in a collapsed flat form is transferred from a bath in which

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the casing has been washed after being impregnated with viscose followed by regeneration, or in the case of regenerated cellulose casing, after regeneration (both of these being well known processes for the preparation of fibrous or regenerated cellulose casing) into a slack box by passage over rolls. (Col. 4, lines 48-55) A slug of coating is then placed inside the casing which is used to bubble coat the inside of the casing. (Col. 4, lines 15-19, 56-60) The coating may also be applied to the surface or surfaces of cellulosic sheets before they are formed into tubes. (Col. 7, lines 32-36)

13. The coating disclosed by Rose may also be used to coat the inside surfaces of casings whose outside surfaces are coated with saran or other polymer compositions as well as casings made from other unreinforced and fibrous type casing films comprising alginates, amylose or polyvinyl alcohol. (Col. 8, lines 14-23) As evidenced by Wessling, saran is generally understood by those of the art to mean films comprising polyvinylidene chloride. (Wessling, pg. 1)

14. The casing or Rose may also be dyed. (Col. 8, lines 5-9)

15. Regarding claims 1, 4, 6, 13, 19, 20, 23, 25, 28 and 30: Rose discloses a tubular food casing comprising a natural fibrous hemp paper or viscose staple reinforcement impregnated with a coating wherein the coating comprises a film forming gelatin protein and a glutaraldehyde or glyoxal cross linking agent. Rose is silent regarding the reinforcement having a weight per unit area of 3 to 400 g/m<sup>2</sup>, however, since the weight per unit area of a paper material is related to its strength, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected through routine experimentation a paper reinforcement material having an appropriate

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weight depending on the amount of strength desired for the casing. “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.” *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) This obvious modification of the invention of Rose would have produced the same invention as claimed in claims 1, 4, 6, 13, 19, 20, 23, 25, 28 and 30.

16. Regarding claim 7: The range of percentage by weight of the protein based on the weight of the casing of Rose overlaps with the range claimed in claim 7. In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990)

17. Regarding claims 8 and 10-12: The coating of Rose comprises starch, which comprises a branched polysaccharide as claimed in claims 8, 10 and 11. Since the starch composition is recited to comprise between 0.05-1% by of the coating solution, the branched polysaccharide would be present in an amount of less than 50% by weight of the dry casing, which overlaps with the range of natural polymer claimed in claim 12.

18. Regarding claims 15 and 16: Rose discloses that the inventive casing may be dyed. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected an appropriate amount of dye to utilize in the casing of Rose depending on the intensity of the color desired for the resulting casing. This obvious modification of the invention of Rose through routine experimentation would have produced the same invention as claimed in claims 15 and 16.



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19. Regarding claims 17 and 18: Rose discloses that the inventive casing may also comprise a coating of polyvinylidene chloride.

20. Regarding claims 21 and 22: Rose discloses the casing production methods claimed in claims 21 and 22.

21. Regarding claim 24: Claim 24 merely recites an intended use for the claimed casing. Applicants attention is drawn to MPEP 2111.02 which states that intended use statements must be evaluated to determine whether the intended use results in a structural difference between the claimed invention and the prior art. Only if such structural difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

22. It is the examiner's position that the intended use recited in the present claims does not result in a structural difference between the presently claimed invention and the prior art and further that the prior art structure is capable of performing the intended use. Given that Rose discloses a sausage casing as presently claimed, it is clear that the sausage casing of Rose would be capable of performing the intended use, i.e. being used in shirred form as a shirred stick or in the form of individual sections, the individual sections being closed at one end by a metal or plastic clip, by tying with yarn or by sewing, presently claimed as required in the above cited portion of the MPEP.

23. Regarding claim 26: The aqueous coating composition of Rose is disclosed to comprise only protein and crosslinking agent. Once the coating is dried, the coating only comprises protein and crosslinking agent. Since the ratio of protein to crosslinking agent in the coating ranges from 1000:1 to 1:1 the ratio of protein to crosslinking agent

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in the dried coating can range from 1000:1 to 1:1. This range of percentages encompasses the range claimed in claim 26. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990)

1. Regarding claims 27 and 31: It would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected an appropriate weight per unit area for the reinforcing layer and an appropriate coating weight for the casing of Rose depending on the thickness of the casing desired. This obvious modification of Rose through routine experimentation would have produced a casing with a weight per unit area as claimed in claims 27 and 31. The casing of Rose modified through routine experimentation would have a water vapor permeability, extensibility and water permeability within the range claimed by applicant since it is made from the same materials disclosed to be useful by applicant. "Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990) (MPEP 2112.01 II) Furthermore, it is well known in the sausage casing art to provide porosity or barrier layers depending on the amount of permeability desired for a sausage casing. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have optimized these properties by providing porosity or

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a barrier layer to the casing of Rose depending on the amount of vapor permeability desired. Such an obvious modification would have produced the same water vapor permeability as claimed in claim 27 or water permeability as claimed in claim 31.

24. Regarding claim 29: The reinforcement layer of Rose is interpreted to be "self-supporting" as claimed in claim 29 since it able to provide support to the casing disclosed. Claim 1 recites that the coating composition "permeates the reinforcement" and therefore, the recitation that the "coating is applied to only an outside surface of said reinforcement" is interpreted to be a product by process limitation because no matter what side of the casing the coating is applied, the coating "permeates" the reinforcement meaning it penetrates throughout the reinforcement material. Although Rose does not disclose coating only the outside of the reinforcement, it is noted that "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process", *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) Further, "although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product", *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir.1983). See MPEP 2113.

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25. Therefore, absent evidence of criticality regarding the presently claimed coating process and given that the casing of Rose meets the requirements of the claimed composite, Rose clearly obviates the requirements of present claim 29.

26. Regarding claim 32: The casing of Rose comprises the same materials as claimed in claim 1 and is therefore interpreted to be “inedible” as claimed in claim 32.

27. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rose U.S. Patent No. 3,383,223 (hereafter referred to as Rose) with evidence provided by Wessling, R. A., Gibbs, D. S., Obi, B. E., Beyer, D., DeLassus, P. T. and Howell, B. A. 2002. Vinylidene Chloride Polymers. Kirk-Othmer Encyclopedia of Chemical Technology (hereafter referred to as Wessling) and Whistler, R. L. and Daniel, J. R. 2000. Starch. Kirk-Othmer Encyclopedia of Chemical Technology (hereafter referred to as Whistler) as applied to claims 1 and 8 above in further view of Gord et al. U.S. Patent Application Publication No. 2002/0064580 (hereafter referred to as Gord).

28. Rose teaches what has been recited above but are silent regarding the addition of polyvinyl acetate or polyacrylate.

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29. Gord teaches a cellulose fiber based sausage casing coated with a solution comprising a protein such as gelatin and other additives. (Para. 18, 19) Polyvinyl acetate and polyacrylate are recited to be useful additives for the protein solution because they impart higher smoke permeability to the casing. (Para. 21)

30. Rose and Gord are all directed towards sausage casings comprising cellulose fiber coated with a solution comprising a protein such as gelatin. One of ordinary skill would have been motivated to utilize polyvinyl acetate or polyacrylate as an additional additive in the coating necessary for the invention of Rose in order to impart higher smoke permeability to the casing. The obvious modification of the invention of Rose by in order to increase the smoke permeability of the casing would have produced the invention claimed in claim 9.

31. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rose U.S. Patent No. 3,383,223 (hereafter referred to as Rose) with evidence provided by Wessling, R. A., Gibbs, D. S., Obi, B. E., Beyer, D., DeLassus, P. T. and Howell, B. A. 2002. Vinylidene Chloride Polymers. Kirk-Othmer Encyclopedia of Chemical Technology (hereafter referred to as Wessling) and Whistler, R. L. and Daniel, J. R. 2000. Starch. Kirk-Othmer Encyclopedia of Chemical Technology (hereafter referred to

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as Whistler) as applied to claims 1 and 8 above in further view of Yasue U.S. Patent No. 6,545,082 (hereafter referred to as Yasue).

32. Rose teaches what is recited above but is silent regarding the water soluble proteins disclosed including collagen. Rose also teaches that useful soluble proteins for the invention include but are not limited to albumins, globulins, glutelins, proalamines, prolines, hydroxyprolines, histones, elastins, protamines, egg albumin, edestin, glutenin, procollagen, gelatin and gliadin. (Col. 3, lines 55-60)

33. Yasue teaches a water soluble coating composition comprising soluble proteins such as whey, egg white (albumin), silk, collagen, casein, gelatin, sericin and serum protein. (Claim 8)

34. Both Rose and Yasue recite aqueous coatings comprising water soluble proteins such as gelatin and egg albumin. Yasue evidences that collagen was known in the art to be a suitable protein for water soluble protein coating compositions. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected collagen as the water soluble protein in the coating composition of Rose since these materials were known in the art to be suitable proteins for aqueous coating compositions. The selection of a known material based on its suitability for its intended use supports a *prima facie* obviousness determination. ("Reading a list and selecting a known compound to meet known requirements is no more ingenious than selecting the last piece to put in the last opening in a jig-saw puzzle." *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945) See also *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960) (selection of a known plastic to make a

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container of a type made of plastics prior to the invention was held to be obvious))  
(MPEP 2144.07) This obvious selection of collagen for the protein in Rose based on its suitability for protein coating compositions would have produced the same invention as claimed in claim 33.

### ***Response to Arguments***

35. Applicant's arguments with respect to claims 1, 4 and 6-33 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michele L. Jacobson whose telephone number is (571)272-8905. The examiner can normally be reached on Monday-Thursday 8:30 AM-6 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571)272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michele L Jacobson/  
Examiner, Art Unit 1782

Michele L Jacobson  
Examiner  
Art Unit 1782